

**Interior Columbia Technical Recovery Team Meeting Minutes**  
**August 18-19, 2003**  
**NMFS Office, 10215 W Emerald Ave Boise, ID**

Members present: Phil Howell, Pete Hassemer, Tom Cooney, Charlie Petrosky, Rich Carmichael, Fred Utter, Michelle McClure, Dave Johnson, Howard Schaller

Non-members present: Jessica Piasecke, Damon Holzer, Vince Kozakiewicz, Mike Bianchi (phone), Angela Somma (18<sup>th</sup>), Phil Rogers (19<sup>th</sup>), Herb Pollard

**I. Population Identification Draft**

Some comments on the Pop ID draft are coming in; the TRT will field questions and comments and address them in the final version of the paper. That version will also include phenotype and life history appendices.

**II. Population-level Viability Criteria**

Approaches to determining productivity and abundance criteria

Potentially contributing analyses/analyses used in past efforts

1. *Population Change Criteria (PCC)(Willamette/LC TRT)*
2. *QAR (informed expert consensus)*
3. *Simple Habitat Capacity (SHC)*

Examines habitat parameters such as area, gradient, and pool/riffle ratios, adjusts for historical conditions, and estimates capacity and an informal range of abundances.

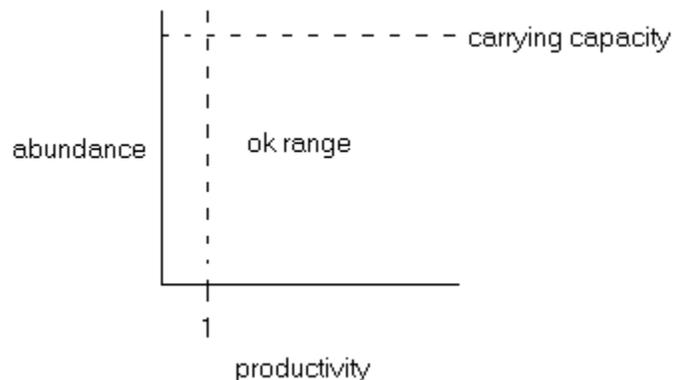
4. *SAR-based approaches*

Uses hatchery return records back to the 1970's to determine marine survival index and correct for ocean conditions.

5. *Stock-recruitment Based (SR)*

If there are comprehensive data on spawner returns. This approach could work well for chinook, but there is probably not enough confidence for it to be used for steelhead.

Potential targets in previous efforts have been bounded by carrying capacity and productivity = one (below).



General discussion:

Establishing productivity/abundance criteria may require four steps:

1. estimate spawner/return relationships (production, carrying capacity, variation)
2. estimate risk isoclines (variation-based)
3. truncate curve (carrying capacity,  $\lambda < 1$  - above)
4. measurement and application

As a preliminary investigation, the TRT could follow these four common steps for some representative populations (possibly some steelhead populations in the John Day, using BRT data) to test the different variance-estimation techniques.

#### Potential Approaches to estimating capacity

- simple historical reconstruction (i.e. habitat-based)
- HPVA (i.e. EDT)
- expansion of spawner numbers/abundance

By the next meeting, members should assemble as many analyses as possible to get through steps one through three, above. Members should think about this plan, and more specific assignments for individual populations will be made during a conference call about available data for this productivity analysis which will occur **August 25, 2003, at 9:00 Pacific time**. All TRT members are invited to join in for the call, and Eric Tinus from La Grande will also participate. **Tom Cooney** will put together a list of questions to be addressed during the call. The agenda will be to:

1. go over data sets that can be analyzed for the next meeting,
2. establish any rules of thumb for expanding redd counts, and
3. decide on a method for completing the analyses

#### Spatial Structure and Diversity Criteria

**Pete Hassemer** and **Rich Carmichael** will develop a straw proposal for ranking population diversity and spatial structure characteristics with respect to risk. Factors to be considered include:

- the environment and its ability to allow all the historic diversity to be expressed
- effective spawners over time
- any genetic diversity or life history data (e.g. heterozygosity)
- how much area is used for spawning
- distribution within that area (number and size of patches, and distance between patches)
- degree of branching
- core areas
- vulnerability to catastrophe
- anthropogenic impacts/selection
- historical bottlenecks

**Michelle McClure** will initiate a literature search on spatial structure, extinction, geographical distribution of patches, and metapopulation dynamics. **Dave Johnson** will look at EDT variables that have a role in spatial structure.

### **III. Case Studies**

The Northwest Fisheries Science Center has been asked to perform a limiting factors analysis on the entire Columbia River basin. The TRT wants to make sure they will agree with the methods chosen by scientists at the NWFSC to complete this task. All TRT members should look over Michelle McClure's handout on the Biological Opinion Remand and prepare comments on the methods.

#### Causes for Decline Paper

Topics:

- detailed all-H analyses for select populations, possibly one per ESU or stratum
- framework and out-of-basin survival
- methods comparison on selected cases
- ESU summary, including out-of-basin factors, tributaries, limiting factors

All members should look over the different methods for the limiting factors analysis and think about which could be best for our case studies. **Michelle McClure** will write up a detailed list of questions to be finalized during a conference call on this topic, which will take place **September 12, 2003 at 10:00 am Pacific time**.

#### Other Efforts

Phil Rogers described the QHA (qualitative habitat assessment) methods being used in Oregon and Idaho. Tom Cooney will outline a summary comparing alternative assessment approaches across key features (level of detail, key habitat factors, etc). **Dave Johnson** will examine the variables in the different approaches and present his findings at the next meeting.

### **IV. ESU-Level Viability – Potential use of STRATA**

Other TRTs have used geography, life history data, and EPA ecoregions as the basis for strata. If the IC TRT creates a database of different characteristics of the different populations, the group can choose to sort by any of the categories used and create strata (groups of populations that are similar in some respect) using different criteria to look at recovery. Important considerations identified in the TRT discussions included: similarities in VSP parameters (spatial structure, diversity), genetic relationships, environmental conditions (exposure to catastrophic risk), and distances between viable populations. **Pete Hassemer** will add genetic, geographic, life history, and other types of data to the spreadsheet of temperature and precipitation he made. The intent of defining strata is to provide a means of protecting against catastrophic risk and maintaining diversity at the ESU level. Specific delisting objectives would apply at the strata level. Important need: identify the specific purpose of the strata (i.e. what characteristics the TRT wants represented for viability).

**V. Public discussion of the Population Identification Draft, August 19, 1-3 pm.**

No one came to discuss.

**Further Meetings Scheduled**

TRT Meetings

September 16-18 in Portland, OR: Tuesday 1-5 pm, Wednesday 8-5, Thursday 8-3

October 16-17 in Pasco, WA

November 12-14 in Boise, ID

December 17-18 in Portland, OR

Conference Calls

August 25, 9:00 am Pacific

September 12, 10:00 Pacific